OAK RIDGE NATIONAL LABORATORY

MANAGED BY UT-BATTELLE FOR THE U.S. DEPARTMENT OF ENERGY

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The Accelerator Readiness Review (ARR) for commissioning of DTL1 together with the Front End Systems has just concluded. The Accelerator Systems division is left with only a few recommendations that need to be implemented before we can begin operation. Expectation is that all of those are closed out within the coming week. As part of this ARR it was discussed to change the commissioning plan and as the next step commission DTL 1-3 within the presently established PPS envelope and shielding environment. Later next spring (Mai timeframe) the CCL and DTL 4-6 will then be commissioned together. The ARR does not see any obstacles and agrees with this approach. The next commissioning step will be proceeded by an ARR that will have a reduced scope. According to this plan that is developed in more detail now, DTL 2 will take priority over all other tanks. We hope that we can deliver and install DTL 2 drift tubes according to the present schedule and then begin operation of DTL 1-3 beginning December FY 04.

Drift tube cap and water channel repair welds are underway at Hanford. Forecast delivery dates are as follows: 4A - 9/23/03; 4B - 9/25/03; 4C - 9/29/03; 4D - 10/03/03. Hanford will be going to overtime so we may pick up schedule. Tank-5: All internal cavity machining and stress relief complete on groups E, F and G are complete, as are water channel weld repair preparations for group E. Tank-6: Water channel welds are complete and stress relief is complete for group 6 H and water channel welds are complete for group 6I. Group 6I is being stress relieved at Bodycote. Waveguide iris exterior machining is underway at CMI: machining of the nose is complete and it is awaiting completion of the vacuum portholes. The unit goes to plating on 8/8. Tank 2: Machining and brazing work continues at ESCO, Bodycote and LANL. Diverter-to-body brazing is underway at LANL for group J. Groups K & L are ready for diverter to body brazing with the diverter to body brazing machining preparation work for group M still in progress. Groups K & L went to Bodycote for brazing on 8/8. Water channel welds are scheduled to begin the next week. Waveguide iris exterior machining is mostly complete; the unit went for vacuum port joint plating.

<u>EMD DT's:</u> Drift tube welding commenced at Sciaky on 8/4 (Fig. 1) and is going well. After 3 days and 6 shifts, 89 welds were made. The first 16 drift tubes were shipped back to LANL for the next stage of fabrication.

<u>BPM DT's</u>: Internal parts for all units are complete and tested. All coolant jackets are brazed and are out for machining. Diverters, stems and end caps are ready and we are in the process of fitting stems and drift tubes in preparation for brazing (Fig. 2). Brazing is scheduled for completion 8/20.

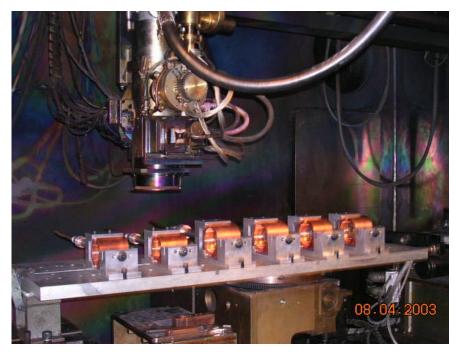


Fig. 1: EMD Drift tubes loaded in e-beam welder.

We are concerned about the delivery schedule of the Tank-2, 4-6 PMQ and empty drift tubes. Current projections still show a 6-week delay. We are looking at all options to recover (e.g., 2 shift operation at Hanford, braze operations near ESCO, elimination of dummy DTs) and in preventing further slippage. Due to electrical failures of magnets during shipping and EMD manufacturing we continue to be short or at zero spares of horizontal magnets. We are making arrangements to return failed magnets to Milhous for repair attempts; in addition Milhous fabricated parts for one more magnet than our order quantity and we will buy this unit and have it made into a horizontal magnet. We will continue to monitor progress and need to develop a contingency plan. We transmitted to ORNL the drawing files which describe the tooling and fixtures we designed to aid in drift tube installation. We strongly recommended that this tooling be made and used for the installation of tank 2, 4, 5 and 6 drift tubes. Failure to make and use this or similar tooling puts personnel and drift tubes at unnecessary risk. The LANL SNS drift tube fabrication organization will be mostly disbanded by the time the tank 5 and tank 6 drift tube installation is underway. It will be difficult to assist with repairs or replacements if a drift tube is damaged in an installation accident

				Tank 4					Tank 5		
Component	Engineer	<u>identifier</u>	Quantity	Shipping Date	Delivered	Change from last week	identifier	Quantity	Shipping Date	Delivered	Change from last week
Drift Tubes	Gentzlinger	44	7	22-Sep-03	0		5E	8	10-Oat-03	D	
		4B	6	25-Sep-03	0		5F	7	14-Out-03	0	
		4C:	6	29-Sep-03	0		56	8	17-Out-03	0	
		4D	8	2-Oct-03	0						
Dummies	Gentzlinger			With DT Groups					With DT Groups		
EMDs	O'Hara		4	20-Oot-03	0			4	20-Out-03	0	
BPMs	O'Hara		2	20-Oot-03	0			2	20-Out-03	0	
Top hats	Rowton	1.25"	27	15-Sep-03	0		1.25"	23	9-Sep-03	D	
Shrouds	Rowton		27	15-Sep-03	0			23	9-Sep-03	D	
Endwalls	Turon		2	Complete	2			2	Complete	2	
Post Coupler Kits	Rowton		27	Bead Pull + 15	О			23	Bead Pull + 15	0	
Slug Tuners	Rowton		12	Bead Pull + 7	0			12	Bead Pull + 7	0	
Access Ports			2		0			2		0	
RF Grils			4		0			4		D	
Wave Guide-Iris	Valdiviez		1	Complete	-1	1		1	Complete	-1	1
Window	Young		- 1	Complete	0	1		1	Complete	D	1
Stands	Turon		1	Complete	1			1	Complete	1	0

Miestones	Date	Date
Ready for RF	14-Nov-03	14-Nov-03
Ready for Beam	28-Feb-04	28-Feb-04
Tank Commissioning complete	1-May-04	1-May-04

				Tank 6					Tank 2		
Component	Engineer	Identifier	Quantity	Shipping Date	Delivered	Change from last week	Identifier	Quantity	Shipping Date	Delivered	Change from last week
Drift Tubes	Gentzlinger	6H	10	24-Oct-03	0		2J	12	30-Sep-03	0	
		61	11	30-Oct-03	0		2K	12	6-Oct-03	0	
							2L	11	10-Oct-03	0	
							2M	8	16-Oct-03	0	
Dummies	Gentzlinger			With DT Groups					None	0	
EMDs	O'Hara		4	1-Oct-03	0			4	1-Oct-03	0	
BPMs	O'Hara		2	1-Oct-03	0			2	1-Oct-03	0	
Top hats	Rowton	1.25"	21	30-Sep-03	0		.75"	41	18-Sep-03	0	
							1.00"	6	18-Sep-03		
Shrouds	Rowton		21	30-Sep-03	0			47	18-Sep-03	0	
Endwalls	Turon		2	Complete	2			2	Complete	2	
Post Coupler Kits	Rowton		21	Bead Pull + 15	0			27	Bead Pull + 15	0	
Slug Tuners	Rowton		12	Bead Pull + 7	0			12	Bead Pull + 7	0	
Access Ports			2		0			1		0	
RF Grills			4		0			4		0	
Wave Guide-Iris	Valdiviez		1	Complete	1	1		1	3-Sep-03	0	
Window	Young		1	28-Aug-03	0			1	28-Aug-03	1	
Stands	Turon		1	Complete	1	0		1	Complete		

Milestones	Date	Date
Ready for RF	14-Nov-03	14-Nov-03
Ready for Beam	28-Feb-04	30-Jan-04
Tank Commissioning complet	1-May-04	1-May-04